

Soundmagus Car Amplifier Specification

1 Model number: A90



2 Features:

- 2X90Wrms Class-AB amplifier.
- 2 ohm load stable.
- Double Side PCB and SMD components.
- Adjustable Input level, LPF, HPF.
- Advanced short circuit, overload, over heat and low voltage protection.
- Gold-plated isolation terminals.

3 Detailed specs:

3.1 Test Condition.

All the specs were tested with following condition unless noted.

1. Power supply: 14.4V DC power supply



2. Test signal: 1KHz sine wave.
3. Loads: Resistor dummy load.
4. Environment: 25 degree C, open air.
5. Relative humidity: 70%.
6. Test Instruments: Audio Precision SYS-2322A.

3.2 Output power performance.

Following table is the RMS output power with THD+N value at 5%, 3% and 1%.

Power THD+N	RMS power (4ohm)		RMS power (2ohm)		Bridged RMS power	
	Left	Right	Left	Right	8ohm	4ohm
THD+N=5%	97W	89W	132W	123W	178W	245W
THD+N=3%	92W	83W	127W	117W	167W	230W
THD+N=1%	89W	79W	121W	108W	159W	218W

Table 1 Output Power with THD+N

Following charts show the output power with THD+N curve at 4ohm load, 2ohm load stereo and bridged power at 8ohm, 4ohm.

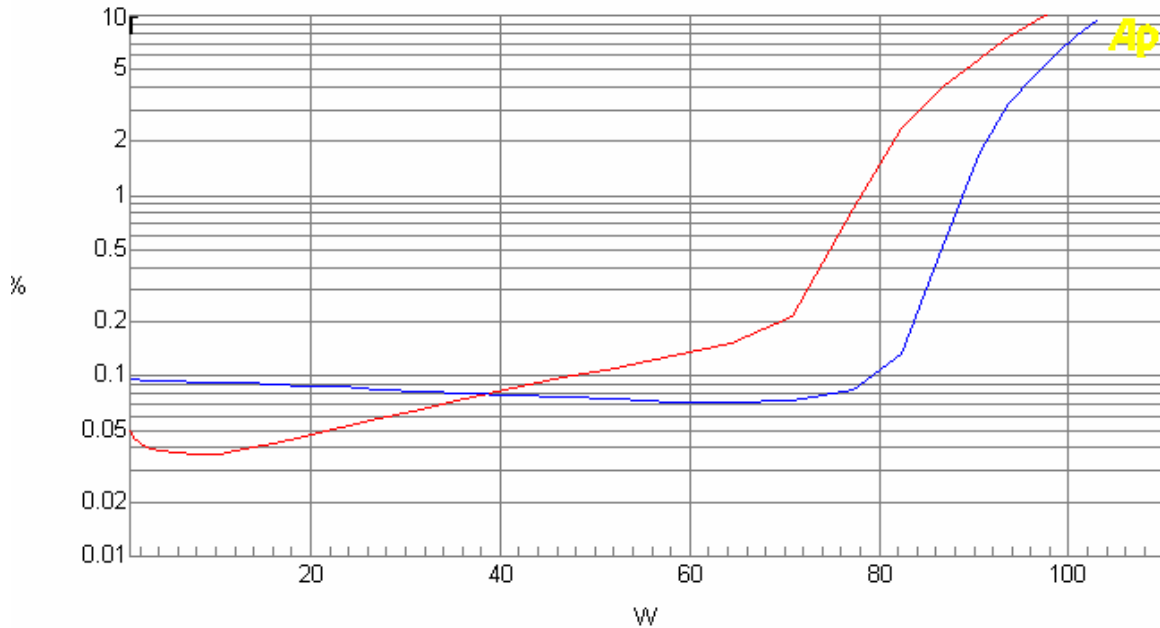


Chart 1. RMS output power @4ohm with THD+N

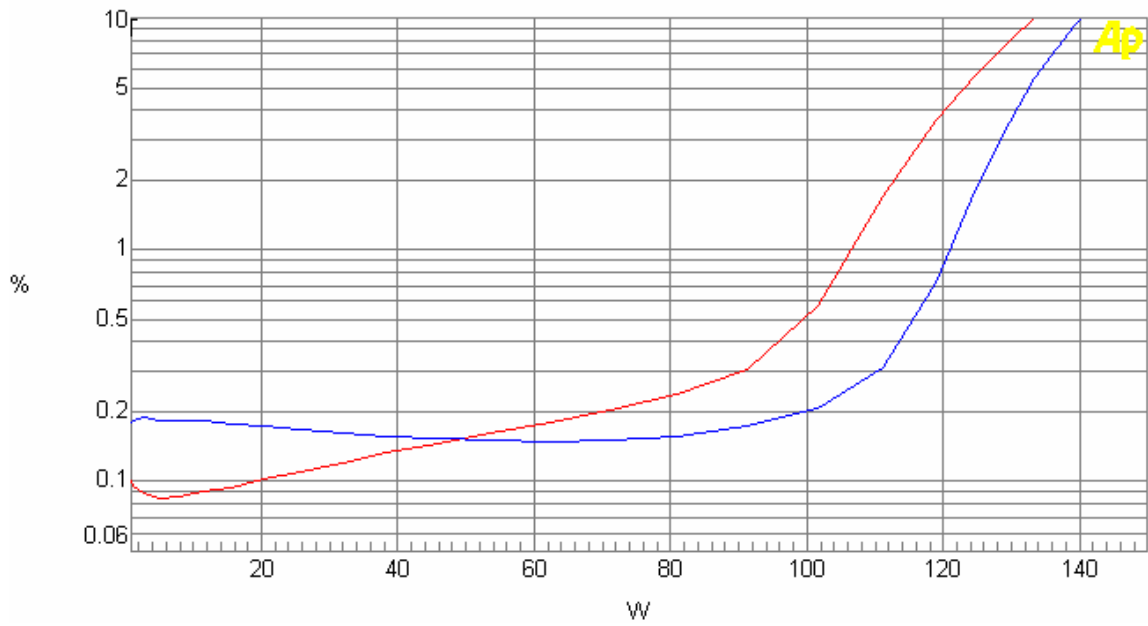


Chart 2. RMS output power @2ohm with THD+N

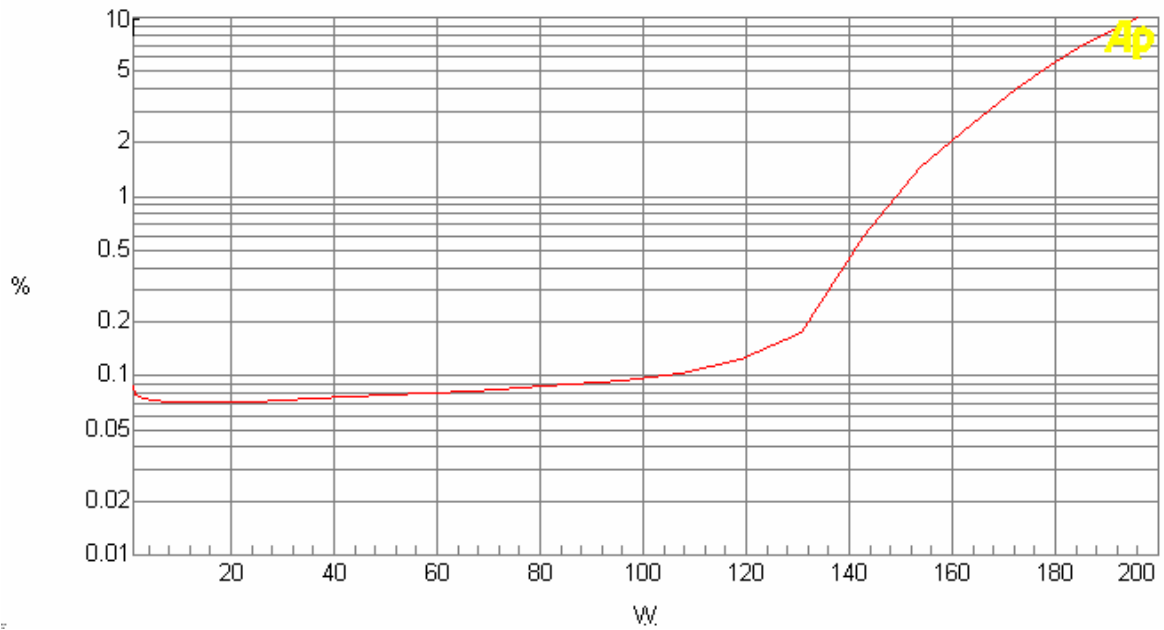


Chart 3. Bridged RMS power @8ohm with THD+N

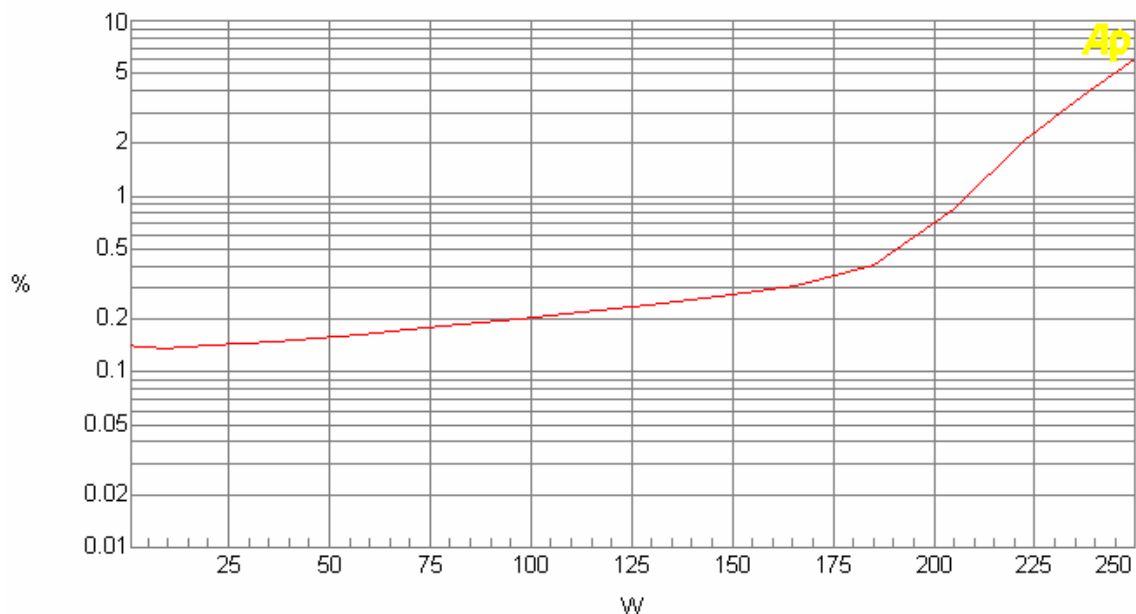


Chart 4. Bridged RMS power @4ohm with THD+N

3.3 Frequency Response

1. -3dB frequency response: 17Hz~68KHz.

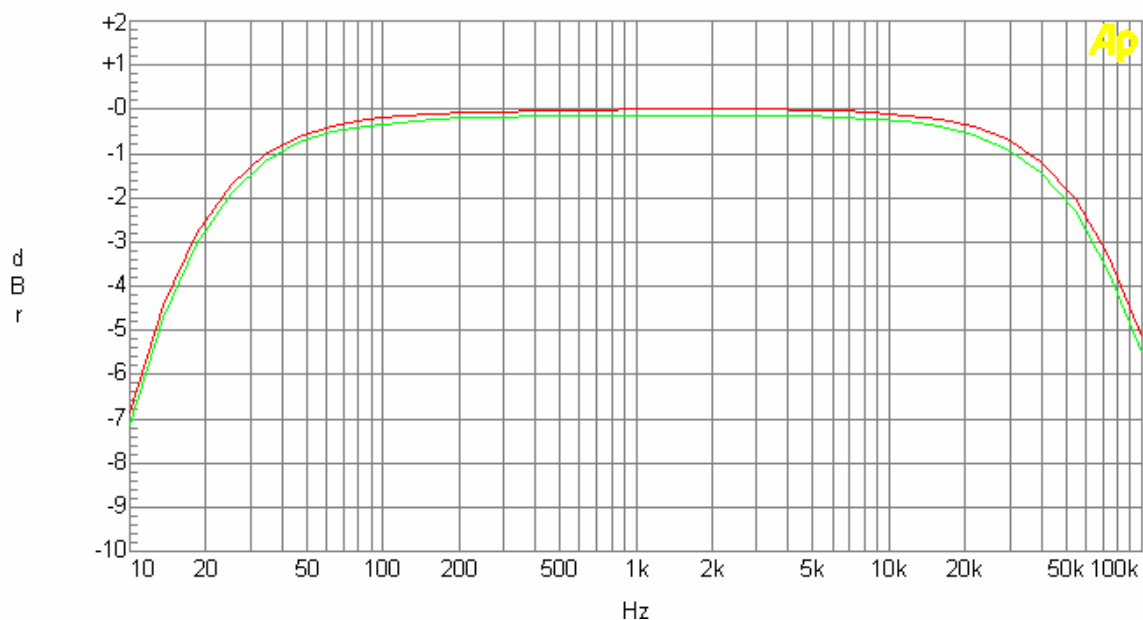


Chart 5. Frequency Response

3.4 LPF & HPF Filter feature

1. LPF adjustable from 53Hz~820Hz.

2. HPF adjustable from 53Hz~740Hz.

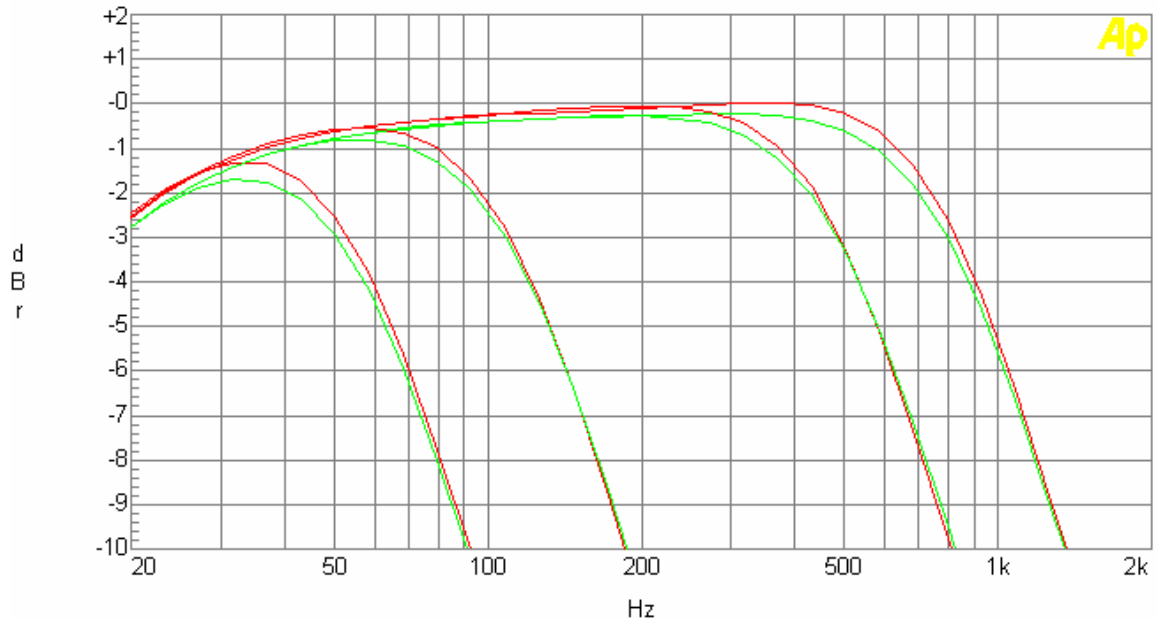


Chart 6. LPF response

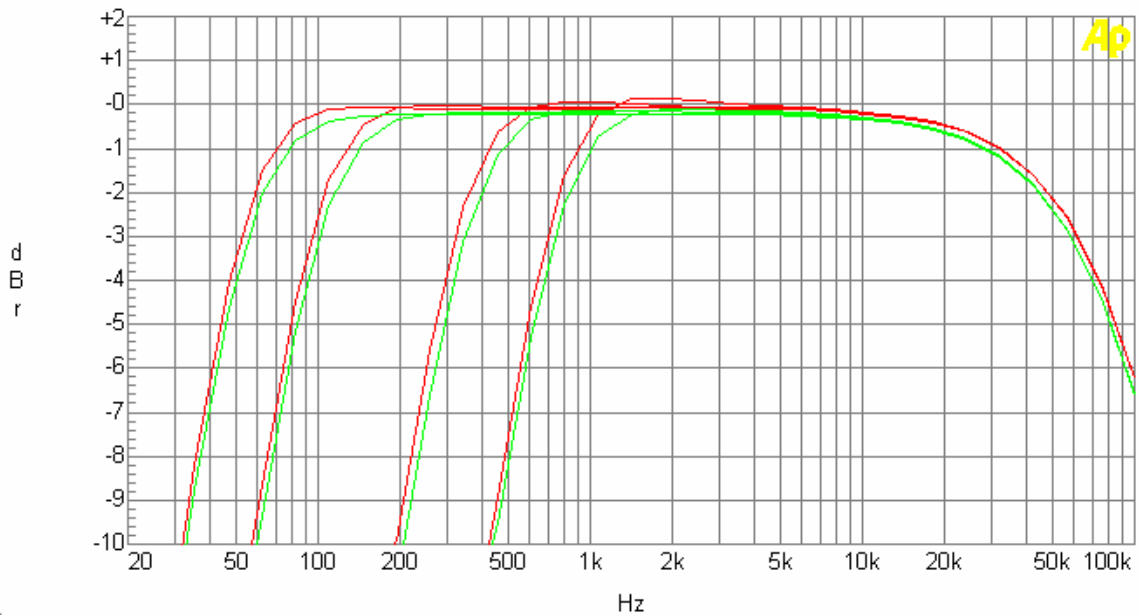


Chart 7. HPF Filter response

3.5 Total Harmonic Distortion

THD+N=0.07%(A-weighted) @ 65W with 4ohm load.



3.6 Protection System

1. Overload:

Protect at 1.3Ohm load at full rated output power.

2. Short Circuit:

Full rated power short circuit protect test: passed.

Full rated power long last short circuit test: 10 minutes passed.

3. Over temperature:

Protect while heat sink temperature over 81 degree C.

4. Low voltage:

Protect while power supply voltage lower than 7.8V.

3.7 Idle current and Efficiency:

1. Idle current: 0.39A.

2. Efficiency: 62% at 80W 4ohm load (stereo).

3.8 Dimension

This amplifier's size is at 228mmX201mmX53mm(W,L,H).